# Oklahoma State University Center for Aerospace and Hyperbaric Medicine

## Research in Unresolved Traumatic Brain Injury

A clinical trial at the Center for Aerospace and Hyperbaric Medicine of Oklahoma State University Center for Health Sciences in Tulsa is evaluating whether hyperbaric oxygen therapy might ease traumatic brain injury. Traumatic brain injury due to explosions and other combat trauma affects an estimated 600,000 veterans of wars in Iraq and Afghanistan. Causes of TBI in civilian life include vehicle accidents, sports injuries, assaults and abuse.

The Center for Aerospace and Hyperbaric Medicine owns and operates the largest hyperbaric chamber in Oklahoma, which can hold up to 12 individuals with support personnel. The center is using this large, multiplace chamber for participation in a national, multicenter clinical trial of the effectiveness of hyperbaric oxygen therapy for treatment of TBI.

When sufficient funding is secured, OSU plans to include up to 100 participants in the clinical trial. That number is about 10 percent of Oklahoma's National Guard who currently suffer with TBI symptoms due to injuries acquired during their service in Iraq and Afghanistan.

The cost to complete the clinical trial is about $1.2 million, which breaks down to about $12,000 per participant. With funding support, Oklahoma veterans could help advance this promising therapy for themselves and their fellow veterans who suffer from TBI experienced while serving our country.

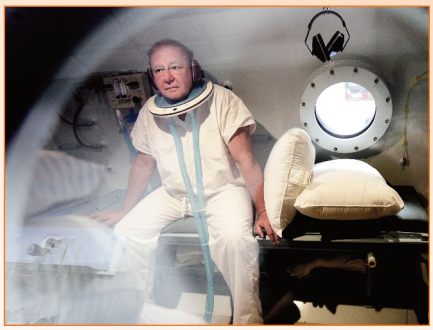
As a major site for the clinical trial, OSU already has enrolled approximately one-third of the total participants to date nationwide. While data collection and analysis is not complete, clinical observations indicate favorable improvements in virtually all participants.

## About the Research Study

**The International Hyperbaric Medical Foundation is studying a low-pressure hyperbaric oxygen treatment protocol in volunteers who have been diagnosed with Chronic Traumatic Brain Injury (TBI)/Post-Concussion Syndrome (PCS) and TBI/Post-Traumatic Stress Disorder (PTSD) in a multicenter clinical trial using an observational study design. All participants in the study receive the trial Hyperbaric Oxygen Therapy. OSU Center for Aerospace and Hyperbaric Medicine is one of 17 study sites in the nation participating in the clinical trial and has studied the greatest number of participants to date.**

### About hyperbaric oxygen therapy

- Hyperbaric oxygen therapy is currently accepted and approved for treatment of more than a dozen medical conditions by professional medical organizations and CMS.
- Use of hyperbaric oxygen for TBI stems from its use for treatment of diving injuries, including those to the brain.
- Results of small studies and reported cases suggest a low-pressure hyperbaric oxygen protocol may ameliorate symptoms of TBI and improve quality of life for TBI sufferers. The National Brain Injury Rescue and Rehabilitation Clinical Trial (NBIRR) is designed to collect scientific evidence of the safety and efficacy of hyperbaric oxygen therapy for TBI/PTSD.



## About OSU Center for Aerospace and Hyperbaric Medicine

- Conveniently located at Tulsa Technology Center on Jones Riverside Airport
  801 E. 91st St., Suite #A-155
  Tulsa, OK 74132
  (918) 828-4288
  http://www.healthsciences.okstate.edu/research/cahm/index.cfm
- PVHO Certified 12-man, dual-lock hyperbaric ("dive") chamber
- Largest hyperbaric oxygen treatment chamber in Oklahoma
- Chamber rated to 165 feet sea water equivalent pressure
- Available for total resource allocation to clinical trial

## Dive Team/Staff

**Paul B. Rock, D.O., Ph.D.,** Medical Director
USA (Ret.) Colonel, Internal Medicine, Flight Surgeon, 30 years
Eight years of hyperbaric oxygen therapy experience
Well-published medical researcher

**Jim Jones,** Dive Technician/Hyperbaric Safety Supervisor
USN (Ret.) Hospital Corpsman Master Chief, 32-Years, SEAL

**David Moyers,** Dive Technician/Hyperbaric Safety Supervisor
USN (Ret.) FCPO Hospital Corpsman, 20-Years

**Lisa Terry, MS, CCRC**
Senior Clinical Research Coordinator; 20 years clinical research experience

**On-Call Team of chamber technicians are all off-duty EMTs and Firefighters**

## Safety

- Certified and experienced Hyperbaric Oxygen Therapy Supervisory Staff
- Established operating protocols
- Continuous Patient Access Through Dual-Lock System
- Deluge and hand-held line Fire Suppression System
- Local Fire Marshall Approved

OKLAHOMA STATE UNIVERSITY
CENTER FOR HEALTH SCIENCES

## About OSU Center for Health Sciences

- Degree programs in osteopathic medicine, biomedical sciences and forensic sciences.
- Post graduate training for osteopathic physicians, research scientists and health care professionals with an emphasis on serving rural and under-served Oklahoma.
- Operates eight clinics: six in Tulsa, one in Enid and one in Muskogee.

**www.healthsciences.okstate.edu**